

APPLICANT(S): KILCOYNE, John T et al.
SERIAL NO.: 10/687,336
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AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1-49. (Canceled)

50. (Currently amended): A system for measuring physiological parameters in the body of a patient indicative of gastroesophageal reflux, the system comprising:

a plurality of sensors adapted to be implanted in the body of a patient, wherein each of the plurality of sensors is capable of ~~periodically measures~~ independently measuring a physiological parameter indicative of gastroesophageal reflux different from other physiological parameters indicative of gastroesophageal reflux measured independently by other sensors and wherein each of the plurality of sensors periodically transmits a signal indicative of the measured physiological parameter that is indicative of gastroesophageal reflux and wherein each of the signals includes an identifier that is indicative of the sensor from which the signal is sent; and

a receiver that receives the signals from the plurality of sensors, determines a location for each sensor within an esophagus based on the identifier, and monitors the physiological parameter indicative of gastroesophageal reflux ~~as a function of distance~~ based on the received signals and the determined locations.

51. (Original): The system of Claim 50, wherein each of the plurality of sensors includes a pH monitor and an RF transmitter.

52. (Previously Presented): The system of Claim 51, wherein each of the plurality of sensors also includes a microprocessor that periodically receives a signal from the pH monitor and induces the RF transmitter to periodically send an RF signal indicative of the pH measured by the pH monitor.

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53. (Previously Presented): The system of Claim 52, wherein the microprocessor of each of the sensors periodically enables the pH monitor of the respective sensor during a first interval of each measurement cycle to obtain the pH signal and then disables the pH monitor during a second interval.

54. (Previously Presented): The system of Claim 53, wherein the microprocessor of each of the sensors enables the RF transmitter of the respective sensor during the second interval and disables the RF transmitter during periods of each cycle other than the second interval and disables the pH monitor of the respective sensor during periods of each cycle other than the first interval.

55. (Previously Presented): The system of Claim 50, wherein the identifier for each of the signals comprises at least one of a frequency or a code.

56. (Previously Presented): The system of Claim 50, wherein the receiver is configured to be worn by the patient.

57. (Previously Presented): The system of Claim 50, wherein the receiver includes circuitry to sense a position of the patient, and the receiver periodically records the position of the patient.

58. (Previously Presented): The system of Claim 50, wherein the receiver monitors a change in pH as a function of distance from a lower esophageal sphincter.